CLAIMS

1. A device for restricting the working range around an axis of an industrial in the form of restriction of the maximum angle for rotation of the first part (4) of the robot relative to a second part (3) thereof, connected to the first part, wherein the robot comprises a fixed stop (5, 6) arranged at the second part, wherein the device comprises a set of stop elements (7, 7′, 7″) and means (8, 9, 14) for fixing an optional number of stop elements on the first part (4) in a row one after the other and making contact with one another along a circular arc around the axis of rotation of the first part, in order to hit against the stop with those end surfaces of the stop elements which are located on opposite ends of the row, when rotating the first part relative to the second part, thus forming opposite end positions for this rotation, **characterized** in that the device comprises members (10-13) for such a mutual connection of stop elements (7, 7′, 7″) arranged adjacent to each other in said row that these elements, with respect to the transmission of forces between them and the stop (5, 6), when hitting against the latter upon said rotation, essentially behave as if they together were one single coherent stop element.

2. A device according to claim 1, **characterized** in that said connecting members (10-13) are adapted, when forming said row, to achieve mechanical interlocking between adjacent stop elements (7, 7′, 7″).

3. A device according to claim 2, **characterized** in that said connecting members comprise tooth-like projections (10) on the essentially tangentially directed surfaces of the stop elements, when a row has been formed, and recesses (11) corresponding thereto on corresponding surfaces of adjacent stop elements.

4. A device according to claim 2, **characterized** in that the connecting members comprise, at the essentially tangentially directed ends of the stop elements, when a row has been formed, essentially axially extending grooves or recesses (12) and projections (13) fitting therein and adapted to be inserted into these.

5. A device according to any of the preceding claims, **characterized** in that said fixing means comprise first holes (8) distributed around the axis of rotation of the arm in said first part and second holes (9) arranged in the stop elements (7, 7′, 7″), as well as elongated rod-shaped pieces (14) which are each adapted to be inserted through a first and a second hole for fixing the respective stop element to the first part.

6. A device according to claim 5, **characterized** in that said pieces are bolts (14) designed for screwing the stop elements (7, 7′, 7″) to said first part.

7. A device according to any of the preceding claims, **characterized** in that said set of stop elements (7, 7′, 7″) comprises stop elements of mutually considerably different lengths with respect to the angle through which they are intended to extend along said circular arc.

8. A device according to claim 7, **characterized** in that said set includes 1-3 first stop elements (7) with a considerably larger said angle than the other stop elements (7′, 7″) which are larger in number than the first ones.

9. A device according to claim 8, **characterized** in that said set includes at least one first stop element (7) with a said angle exceeding 60°, preferably between 65° and 90°.

10. A device according to claim 8 or 9, **characterized** in that said set includes several, preferably 3-6, other stop

element (7, 7′, 7″) with a said angle between 10° and 40°, preferably 15° and 30°.

11. A device according to any of the preceding claims, **characterized** in that the stop elements (7, 7′, 7″) are formed from blocks having essentially the shape of truncated sectors of a circle.

12. A device according to any of the preceding claims, **characterized** in that said means (8, 9, 14) are adapted to fix the stop elements to an arm of an industrial robot.

13. A device according to any of the preceding claims, **characterized** in that it is designed for application to a rotary joint (A) between first and second parts in the form of two arms (3, 4) of an industrial robot.

14. A device according to any of claims 1-11, **characterized** in that it is designed for application to a rotary joint (C) in the form of a stand (1) and a robot foot (2) of an industrial robot.

15. A method for providing a restriction of the working range around an axis of an industrial in the form of restriction of the maximum angle for rotation of a first part (4) of the robot relative to a second part (3) thereof, connected to the first part, wherein the robot comprises a fixed stop (5, 6) arranged at the second part, to which an optional number of a set of stop elements (7, 7′, 7″) are fixed to the first first part (4) in a row one after the other and making contact with one another along a circular arc around the axis of rotation of the first part, in order to hit against the stop with those end surfaces of the stop elements which are located at opposite ends of the row, when rotating the first part relative to the second part, thus forming opposite end positions for this rotation, **characterized** in that stop elements (7, 7′, 7″) located adjacent to each other in said row are mutually connected

to one another in such a way that these stop elements, with respect to the transmission of forces between them and the stop (5, 6), when hitting against the latter upon said rotation, essentially behave as if they together were one single coherent stop element.

16. A method according to claim 15, **characterized** in that adjacently located stop elements are mutually connected to one another by joining them together to achieve mechanical interlocking thereof to one another.